

BORISOV, Ye.

BORISOV, Ye.; PYATNOVA, I.

Where sugar is made. Znan.sila no.9:18-26 S '54.(MLRA 7:10)
(Sugar industry)

BORISOV, Ye.; PYATNOVA, I.

Bread on a conveyer system. Znan.sila no.12:3-5 D '54.(MLR 8:1)
(Bread)

Borisov, Y.

BORISOV, Ye.; PYATNOVA, I.

Speed insures freshness. Znan.sila 30 no.7:31-35 J1'55.
(Meat industry) (MIRA 8:10)

BORISOV, Ye.

BORISOV, Ye.; PYATNOVA, I.

Bread and automatic machinery. Znan. sila 32 no.7:38-40 J1 '57.
(Bakers and bakeries--Equipment and supplies) (MLBA 10:8)
(Automation)

BORISOV, Ye.

USSR/Electronics - Amplifiers

Mar 53

"A Phase Inverter with a Split Load"^h Ye. Borisov, Leningrad
"i

Radio, No 3, p 51

The left triode of a 6N8S twin triode functions as a voltage amplifier while the right triode is used in phase inversion. Two variations of the circuit are given, one employing negative feedback and the other, positive feedback. Regenerative feedback increases gain to 21.

25 Tot

BORISOV, Ye.

STUDENTSOV, V. (Riga); SALOSHIN, F. (g.Valuyki, Belgorodskoy oblasti);
BORISOV, Ye.

Exhibits of radio amateurs' creations. Radio no.8:6-7 Ag '54.
(Radio--Apparatus and supplies) (MLRA 7:8)

BORISOV, Ye.

Source: [REDACTED]

Universal tone control mechanism. Radio no. 11:37 N'55.

(MIRA 9:1)

(Radio--Apparatus and supplies)

BORISOV, Yevg.

By an invisible pen. Znan.sila 31 no.1:42-44 Ja '56. (MLBA 9:4)
(Sound--Recording and reproducing)

107-57-2-51/56

AUTHOR: Borisov, Ye.

TITLE: Obtaining an Exponential and Logarithmic Relationship From a Linear Relation. Experience Exchange
(Polucheniye pokazatel'noy i logarifmicheskoy zavisimosti iz lineynoy. Obmen opytom)

PERIODICAL: Radio, 1957, Nr 2, p 56 (USSR)

ABSTRACT: An amateur radio designer often needs a logarithmic or exponential relation between the resistance and the slider angle of his potentiometer. Most commercial potentiometers have a linear relation. Two circuits and characteristics are presented, illustrating the possible conversion of a linear relation to an exponential and a logarithmic relations. The disadvantage of the circuits is the fact that the potentiometer input resistance changes 4 times between the 2 extreme slider positions.

There is 1 figure in the article.

AVAILABLE: Library of Congress

Card 1/1

BORISOV, Ye.

The feed of a flash lamp using alternating current. Sov. foto
17 no.9:55 S '57. (MLRA 10:9)
(Photography, Flash-light--Apparatus and supplies)

BORISOV, Ye. (Leningrad)

Simple device for testing transistors. Radio no.3:37 Mr '61.
(MIRA 14:8)
(Transistors--Testing)

BORISOV, Ye.

Synchronizer for amateur motion picture projectors. Radio no.12:
38-40 D '61. (MIRA 14:12)
(Motion-picture projectors--Equipment and supplies)

BORISOV, Ye.; ZHIDENKO, D.; KASHUTIN, P.

Social and economic problems of technological progress under
socialism. Sots. trud 6 no.9:146-149 S '61. (MIRA 14:9)
(Technology and civilization)

BORISOV, Ye., inzh.

A simple photoelectric flash device. Radio no.2:29-30 F '63.
(MIRA 16:2)

(Photography--Lighting)
(Photography--Electronic equipment)

BORISOV, Yu.

A helicopter and wind. Kryl. red. 16 no.2:15 P '65.

(MIRA 18:3)

1. Starshiy inspektor-letchik upravleniya aviatsionnoy podgotovki
i sporta Tsentral'nogo komiteta Vsesoyuznogo dobrovol'nogo
obshchestva sodeystviya armii, aviatsii i flotu SSSR.

BORISOV, Ye.

Group helicopter flights. Kryl. rod. 16 no. 7:19-20 J1 '65.

1. Starshiy inspektor-letchik Upravleniya aviatsionnoy podgotovki i sporta Tsentral'nogo komiteta Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.

BORISOV, Ye.

Air weather reconnaissance. Kryl. rod. 16 no.9:15 S '65.

(MIRA 18:12)

1. Starshiy inspektor-letchik Upravleniya aviatsionnoy podgotovki
i sporta Tsentral'nogo komiteta Vsesoyuznogo dobrovol'nogo
obshchestva sodeystviya armii, aviatsii i flotu SSSR.

BORISOV, Ye. .

Control panel for helicopter flights. Kryl. rod. 14 no.12:21
D '63. (MIRA 17:2)

1. Starshiy inspektor-letchik Upravleniya aviatsionnoy
podgotovki i aviatsionnogo sporta Tsentral'nogo komiteta
Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i
flotu SSSR.

BORISOV, Ye.

Piloting a helicopter in winter. Kryl. rod. 15 no.1:15-16
Ja '64. (MIRA 17:2)

1. Starshiy inspektor--letchik upravleniya aviatsionnoy pod-
gotovki i aviatsionnogo sporta Tsentral'nogo komiteta Dobro-
vol'nogo obshchestva sodeystviya armii, aviatsii i flotu
SSSR.

BORISOV, Y. A., KRYLOV, A. P., TREBIN, F. A., KOROTKOV, S. T., BUCHIN, A. N.,
MAMIMOV, M. I., ABASOV, M. T., MIRCHINK, M. F., VASILEVSKIY, V. N., SHELKACHEV, V. N.,
KOZLOV, AL., and MINSKIY, E. M.

"Development of the Theory and Practice of Oil and Gas Field Production
in the USSR."

^{to be}
Report submitted at the Fifth World Petroleum Congress, 30 May -
5 June 1959. New York City.

U S S R .

Sulfonation of some saturated compounds. I. P. Boriso, *Vestnik Morsk. Univ.* 8, No. 6, Ser. Fiz.-Mat. Nauk No. 4, 117-20 (1953); cf. *C.A.* 45, 8445g. — Different methods of sulfonation of the following were investigated: MeNO₂ (I), nitrocyclohexane (II), MeCN (III), MeCH₂CN (IV), AcOEt (V), EtCO₂Et (VI), MeCO₂Et (VII), PrCO₂H (VIII), Me₂CCH₂CN (IX), and CH₃(CO₂Et)₂ (X). Pyridine-SO₂ did not sulfonate the above even at 150°. SO₂ soln. with I at first gave a homogeneous, transparent liquid, which suddenly underwent a violent reaction with evolution of CO₂, NO₂, and SO₂. The following 3 reagents in (CH₂Cl)₂ gave variable results: (a) SO₂; (b) pyridine-ESO₂ prep. by adding SO₂ to pyridine-SO₂ under (CH₂Cl)₂; and (c) dioxane-SO₂. The products as Ba salts and the yields in % from a, b, and c were as follows: I, (CH₃O₂NS)₂Ba, 14.9, 4, 6; II, (C₆H₁₁O₂NS)₂Ba (sic), 25.5, 20, 20; III (C₂H₅O₂NS)₂Ba·H₂O, 35, 23, 70; IV (C₂H₅O₂NS)₂Ba·2H₂O, 7.7 g. from 4 g. IV, 80, —; V C₄H₉O₂S₂Ba, 35, quant., quant.; VI C₄H₉O₂S₂Ba, 48, quant., —; VII C₄H₉O₂S₂Ba, 15, —, quant.; VIII (C₂H₅O₂NS)₂Ba·2H₂O, 12.7 g. from 7 g. VIII, quant., —; IX and X with c have yields of 25 and 50%, resp. All Ba salts were water-sol. Those of I and II did not hydrolyze in boiling H₂O; the salts of the nitriles hydrolyzed in boiling H₂O to give amides, in alk. solus. to give NH₃. The ethers gave diacids very readily; the monoacids could be obtained only with the greatest care, the salts were difficult to isolate in the pure state. I. Benicowitz

BORISOV, Ye. A.

AUTHORS: Borisov, Ye. and Pyatnova, I. 4-12-13/24
TITLE: Extraordinary Transformations (Neobychaynyye prevrashcheniya)
PERIODICAL: Znaniye - Sila, 1957, # 12, pp 36 - 40 (USSR)
ABSTRACT: The authors give as an introduction a description of future solar and atomic thermal stations, which though not in existence at the present time are not an illusion, due to the existence of semi-conductors. In this article the authors deal with one of their varieties - the thermo-elements. However, these elements are not yet applicable in power plants.
AVAILABLE: Library of Congress
Card 1/1

BORISOV, Ye. A.: Master Chem Sci (diss) -- "The problem of the chemical action of a radioactive atom, bromine, obtained in the (P,8) reaction". Moscow, 1958. 16 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov, Chem Faculty, Chair of Inorganic Chem, Laboratory of Radiochem), 100 copies (KL, No 5, 1959, 144)

AUTHORS: Nesmeyanov, An. N. , Borisov, Ye. A. (Moscow) SOV/74-27-2-1/5

TITLE: Chemical Effects of Atoms Produced by Nuclear Reaction
(Khimicheskoye deystviye atomov, poluchayushchikhsya v
rezul'tate yadernykh prevrashcheniy)

PERIODICAL: Uspekhi Khimii, 1958, Vol. 27, Nr 2, pp. 133 - 161 (USSR)

ABSTRACT: The article has to generalize the most recent results of the
"chemistry of hot atoms". The data, which were not contained
in the article of An. N. Nesmeyanov, L. A. Sazonov and I. S.
Sazonov (Reference 1) and in chapter 8 of the book "The
Utilization of Radioactivity in Chemical Investigations"
(Reference 2) were particularly considered. The organic
systems are principally treated.
In the (n,γ) -reaction the atom obtains a high kinetic energy
and most frequently it tears off itself from the molecule..
It was observed in experiments that molecules are formed by
the emitted atom, which contain the initial isotope of the
 (n,γ) -reaction. This phenomenon is called "adherence"(uder-
zhaniye).

Card 1/3

SOV/74-27-2-1/5

Chemical Effects of Atoms Produced by Nuclear Reaction

The following chapters are treated:

- I. The behavior of atoms, which are formed by the capture of slow neutrons.
 - 1) The influence of temperature and state of aggregation on the "adherence" in organic compounds after (n, γ) -reaction.
 - 2) The dependence of "adherence" on the mass of the colliding particles and on the initial energy of the emitted atoms, as regarded from the standpoint of the theory of elastical collision.
 - 3) The influence of additions before the bombardment on the "adherence" in (n, γ) -reactions.
 - 4) The dependence of "adherence" on the structure of alkyl halides.
 - 5) The entering of emitted atoms into the molecules of substituted aromatic hydrocarbons.
- II. The chemical behavior of atoms, which have been formed by other nuclear reactions resulting in an isotope of the initial element, as well.
 - 1) The chemical behavior of atoms, which have been formed by isomeric transmutation.
 - 2) The chemical behavior of atoms, which have been formed by

Card 2/3

SOV/74-27-2-1/5

Chemical Effects of Atoms Produced by Nuclear Reaction

a (d,p)-, (n, 2n)- or (γ , n)-reaction. There are 12 figures,
15 tables, and 77 references, 9 of which are Soviet.

Card 3/3

NESMEYANOV, A.N.; BORISOV, Ye.A.

Chemical action of radioactive bromine atoms produced by the
reaction of bromine with neutrons in chlorobromomethane, dichloro-
bromomethane, and chlorodibromomethane. Radiokhimiia 1 no.1:86-90
'59. (MIRA 12:4)

(Bromine—Isotopes) (Neutrons) (Methane)

NESMEYANOV, An. N.; BORISOV, Ya. A.; ZVARA, I.

Chemical action of radioactive bromine atoms formed in the reaction of bromine with neutrons in halogen derivatives of methane. Radiokhimiya 1 no.3:325-335 '59. (MIRA 12:10)
(Bromine) (Methane)

NESMEYANOV, An.N.; BORISOV, Ye.A.; FILATOV, E.S.; KONDRATENKO, V.I.;
CHZHAN TSZE-SYAN [Chang Chieh-hsiang]; PANIK, K.; SHUKLA, B.V.

Secondary reactions of the recoil atoms bromine-82 and bromine-80m in bromomethanes. Radiokhimiia 1 no.6:712-716
'59. (MIRA 13:4)
(Bromine--Isotopes) (Methane)

* 222K K

LORISOV Ye A.

21(0) 5(0)

AUTHOR:

TITLE:

PERIODICAL:

ABSTRACT:

Card 1/4

Card 2/4

Card 3/4

Lepitskiy, A.Y.

The First All-Union Conference of Universities and Colleges on Radiochemistry

SOV/55-59-3-29/72

Yestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, 3r 3, pp 221-222 (USSR)

This conference was convened by the initiative of the

laboratory of radiochemistry of the Department of Chemistry of Moscow

State University) and was held in Moscow from April 20 to

April 25, 1959. It was attended by professors, teachers, and

scientific collaborators of 32 universities and colleges of

the Soviet Union. In his opening address, A.M. Kiselev, Deputy

Director of Chemical Sciences, stressed the importance of radio-

chemistry. 30 lectures were delivered by members of Moscow

State University: A.M. Kiselev, A.M. Kiselev, A.M. Kiselev, A.M. Kiselev,

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5(2)

AUTHORS:

SOV/78-4-10-3/40
Khandamirova, N. E., Yevseyev, A. M., Pozharskaya, G. V.,
Borisov, Ye. A., Nesmeyanov, An. N., Gerasimov, Ya. I.

TITLE:

Pressure of Saturated Vapor of Beryllium Fluoride

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 10,
pp 2192-2195 (USSR)

ABSTRACT:

Beryllium fluoride was produced according to the method of A. V. Novoselova from beryllium sulfate. The vapor pressure was measured by means of effusion in vacuum and determination of the weight lost during the experiment (Method 1) or by analysis of the resultant condensate (Method 2). The effusion chamber in method 1 was made of tantalum (Fig 1) and was heated by a "Mars"-electric furnace with a power of 1200 w, the temperature was checked thermoelectrically by means of the PPTN-1 potentiometer. In method 2 the effusion chamber consisted of molybdenum. The condensate was analyzed with the colorimetric photometer of the FEK-52 type by using the reagent "Berillon-11 IRY6A". Both methods gave values in good agreement which are given in table 1. By means of the values obtained and of the data found by the Institut gosyuchikh iskopayemykh

Card 1/2

Pressure of Saturated Vapor of Beryllium Fluoride

SOV/78-4-10-3/40

Akademii nauk SSSR (Institute of Combustible Minerals of the Academy of Sciences, USSR) for the thermodynamic potentials of the gaseous and solid beryllium fluoride the heat of sublimation was calculated to be 55.2 ± 0.6 kcal/mole at 0°K , which is also given in table 1. Table 2 compares this value with the data obtained by K. A. Sense et al (Ref 1) and the value computed on the basis of the 3rd law of thermodynamics. There are 2 figures, 2 tables, and 1 reference.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 20, 1958

Card 2/2

BORISOV, Ye. A., SHUKLA, B. N., NESMEYANOV, A. N., FILATOVE, E. S. (USSR)

"Isotope Effect and Secondary Reactions of Bromine Recoil Atoms Accompanying
(n, γ) Process".

paper submitted for the Symposium on the Chemical Effects of Nuclear Transformation
(IAEA) Prague, 24-27 Oct. 1960.

5.4-210
 1971
 1/076/60/034/07/03/003
 2015/2070
 AUTHORS: Kuznetsov, An. M., Khondomirova, T. E., Vilenskij, V. D.,
 Shilin, Ye. A., Borikova, Ye. A.
 TITLE: Effect of Oxide Films on the Rate of Vaporization
 PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 7,
 pp. 1429-1429
 TEXT: The effect of oxide films on the rate of vaporization of metallic
 lead, cadmium, zinc and bismuth was investigated by the method of
 isotopic exchange (also by the method of Knudsen's method
 and the method of exchange method 205, Cd, Zn, and Bi were used
 as indicators. For the Knudsen's method A 20K-52 (IZ-52) colorimeter
 and the reagent "berillon II MPFA (HRA)" were used. The colorimetric
 determination of lead was carried out in the Laboratory of Geochemical Geo-
 logical and Mineralogical Research (Laboratory of Geochemistry of the Department
 of Geology of MSU). The values obtained are given in Tables 1-3. The re-
 sults of the experiments show that the method of isotopic exchange can be
 used for the study of the mechanism of vaporization and the determination
 of the vaporization coefficients. A dependence of the rate of vaporization
 and Langmuir coefficient α on the degree of oxidation is found. The rate
 of vaporization depends on the mechanical treatment of the metal surface
 and the residual pressure in the instrument. At temperatures between
 410 and 545°C solid solutions of lead oxides with varying composition
 Pb_3O_4 are formed on the surface. The oxide films on the metal surface may
 lead either to a decrease (Zn, Cd, Bi) or an increase (Pb) of the measured
 values of the vapor pressure. There are 3 tables and 14 references.
 4 Soviet, 5 American, 2 German, 1 British, and 1 French.
 ASSOCIATION: Moscow State University (Moscow State University) (Moscow State University)
 SUBMITTED: September 6, 1958
 Card 1/2

Effect of Oxide Films on the Rate of Vaporization 1/076/60/034/07/03/003
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 used for the study of the mechanism of vaporization and the determination
 of the vaporization coefficients. A dependence of the rate of vaporization
 and Langmuir coefficient α on the degree of oxidation is found. The rate
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 ASSOCIATION: Moscow State University (Moscow State University) (Moscow State University)
 SUBMITTED: September 6, 1958
 Card 2/2

BORISOV, Yevgeniy Borisovich; PYATNOVA, Irina Ivanovna; PEDCHENKO, V.,
red.; KUVYRKOVA, L., tekhn.red.

[Key to the sun; the story of semiconductors] Kluch k solntsu;
rasskazy o poluprovodnikakh. Moskva, Izd-vo TsK VIKSM "Molodaya
gvardiya," 1960. 255 p. (MIRA 13:5)
(Semiconductors)

BORISOV, Ye.B., inzhener.

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Mechanical, transportable table for cutting out. Leg.prom. 17
no.6:44-46 Je '57. (MLBA 10:8)
(Garment cutting)

BORISOV, Yevgeniy Borisovich; PYATNOVA, Irina Ivanovna; FEDCHENKO, V.,
red.; BUGROVA, A., tekhn. red.

[A key to the sun; stories about the young science and new technological field making possible space radio and television, electric power plants without machinery and much else, in a word-stories about semiconductors] Kliuch k solntsu; rasskazy o molodoi nauke i novoi oblasti tekhniki, sdelayshei vozmozhnym kosmicheskoe radio i televidenie, elektrostantsii bez mashin i mnogoe drugoe, - slovom, rasskazy o poluprovodnikakh. 2., dop. izd. Moskva, "Molodaia gvardiia," 1964. 303 p. (MIRA 17:4)

BORISOV, Ye.F., kand.ekonom.nauk

Maximum utilization of means for reducing production costs.
Tekst. prom. 20 no. 11:8-11 N '60. (MIRA 13:12)
(Textile industry--Costs)

BROVER, Izrail' Moiseyevich, prof., doktor ekonom. nauk; BOBILOV, Karl
Illarionovich, kand. ekonom.nauk, dots.; BORISOV, Levgeniy Filip-
povich, kand. ekonom.nauk; MATSUK, R.V., red.; GRIGORCHUK, L.A.,
tëkh. red.

[A reader on economics; socialist production methods] Khrestoma-
tiia po politicheskoi ekonomii; sotsialisticheskii sposob proiz-
vodstva. Moskva, Gos.izd-vo "Vysshiaia shkola," 1961. 412 p.
(MIRA 14:12)

(Economics)

SMIRNOV, A.D., kand. ekon. nauk, dots., otv. red.; BORISOV, Ye.F.,
kand. ekon. nauk, otv. red.; BUDARINA, V., red.; NOGINA, N.,
tekhn. red.

[Program for a course on economics for institutions of higher
learning (90 hours)]Programma kursa politicheskoi ekonomii dlia
vysshikh uchebnykh zavedenii (90 chasov). Moskva, Sotsekgiz,
1962. 29 p. (MIRA 15:12)

1. Russia (1923- U.S.S.R.)Upravleniye prepodavaniya obshchest-
vennykh nauk.

(Economics)

BORISOV, Yevgeniy Filippovich; ZAYTSEV, Rostislav L'vovich;
STEBUNOV, N.S., red.; PONOMAREVA, A.A., tekhn. red.

[Socialist competition and the economics of enterprises]
Sotsialisticheskoe sorevnovanie i ekonomika predpriatii.
Moskva, Ekonomizdat, 1962. 93 p. (MIRA 15:10)
(Socialist competition) (Industrial management)

MASLOVA, Nadezhda Semenovna; BORISOV, Yevgeniy Filippovich; PANKRAT'YEV, Viliy Gavrilovich, ~~mladshiy nauchnyy sotr.~~; PLOTNIKOV, K.N., red.; ZALKIND, A.I., red.; GERASIMOVA, Ye.S., tekhn. red.

[Wages and production costs in U.S.S.R. industries] Zarabotnaya plata i sebestoimost' produktsii v promyshlennosti SSSR. Pod obshchei red. K.N.Plotnikova. Moskva, Izd-vo ekon. lit-ry, (MIRA 15:3) 1962. 267 p.

1. Institut ekonomiki Akademii nauk SSSR (for Pankrat'yev).
2. Chlen-korrespondent Akademii nauk SSSR (for Plotnikov).
(Wage payment systems) (Costs, Industrial)

BORISOV, Ye.F., kand.ekonom.nauk

Role of socialist competition in increasing communal labor
productivity; based on the example of the textile industry for the
period from the 21st to the 22d Congress of the CPSU. Trudy
Mosk. inst. tonk. khim. tekhn. no.1:3-19 '62. (MIRA 17:4)

BORISOV, Yevgeniy Filippovich; BROVER, Izrail' Moiseyevich, prof.;
LARINA, Raisa Yefimovna; MADYANOV, Aleksandr Stepanovich;
SAMOYLENKO, Ivan Ivanovich; CHERNYSHEV, Nikolay Tikhonovich

[Reader in economics; precommunist means of production] Khrestomatia po politicheskoi ekonomii; dokommunisticheskie sposoby proizvodstva. Pod red. I.M. Brovera. Moskva, Gos. izd-vo "Vysshaya shkola," 1963. 378 p. (MIRA 16:7)

1. Prepodavateli kafedry politicheskoy ekonomii Volgogradskogo pedagogicheskogo instituta (for Brover, Larina, Madyanov, Samoylenko, Chernyshev). 2. Vsesoyuznyy nauchnyy finansovo-ekonomicheskii institut (for Borisov).
(Economics)

BORISOV, Ye.F., dots.; BREGEL', E.Ya., prof.; BUKH, Ye.M., dots.;
VASHENTSEVA, V.M., dots.; GOLEVA, Yu.P., kand. ekon. nauk;
GOLEVA, A.P., kand. ekon. nauk; DEMOCHKIN, G.V., dots.;
DONABEDOV, G.T., kand. ekon. nauk; YERMOLOVICH, I.I., dots.;
KALYUZHNYI, V.M., dots.; KORNEYEVA, K.G., dots.; KUZNETSOVA,
A.S., prof.; MIROSHNICHENKO, V.S., dots.; MYASNIKOV, I.Ya.,
kand. ekon. nauk; PIKIN, A.S., dots.; SIDOROV, V.A.; SMIRNOV,
A.D., dots.; SOLOV'YEVA, K.F., dots.; SOROKINA, I.F., dots.;
TARUNIN, A.F., kand. ekon. nauk; KHARAKHASH'YAN, G.M., prof.;
MENDEL'SON, A.S., red.; SHVEYTSEY, Ye.K., red.; ROTOVA, R.S.,
red.; GARINA, T.D., tekhn. red.

[Economics of socialism] Politicheskaya ekonomiya sotsializ-
ma. Moskva, Gos.izd-vo "Vysshaya shkola," 1963. 476 p.
(MIRA 17:2)

BORISOV, Ye.F., kand. ekon. nauk, dots., otv. red.; AVETISYAN, Ye.,
red.

[Program for the course on economics; for institutions of
higher learning (120 and 130 hours)] Program kursa poli-
ticheskoi ekonomii; dlia vysshikh uchebnykh zavedenii (120
i 130 chasov). Moskva, Politizdat, 1963. 29 p.

(MIRA 17:9)

1. Russia (1923- U.S.S.R.) Upravleniye prepodavaniya ob-
shchestvennykh nauk.

BORISOV, Ye.F., kand. ekon. nauk, dots., otv. red.; LEFNIKOVA, Ye.,
red.

. [Program for a course in economics for institutions of
higher learning (280 hours)] Programma kursa politiche-
skoi ekonomii dlia vysshikh uchebnykh zavedenii (280 cha-
sov). Moskva, Izd-vo "Mysl'," 1964. 46 p. (MIRA 17:8)

1. Russia (1923- U.S.S.R.) Upravleniye prepodavaniya ob-
shchestvennykh nauk.

VOROB'YEV, A.T., glav. red.; POLYAKOV, L.N., zam. glav. red.; BORISOV,
Ye.G., red.; IVASYSHIN, S.N., red.; IMANALIYEV, Sh.I., red.; LYA-
SHENKO, I.V., red.; OLEYNIK, A.K., red. Prinimali uchastiye: BEK-
BOYEV, D.B., spets. red.; KIRKIN, M.F., spets. red.; TETEVIN, G.P.,
spets. red.; YUDAKHIN, N.P., red.; YEFIMOV, N.A., tekhn. red.

[Agriculture of Kirghizistan] Sel'skoe khoziaistvo Kirgizii; kratkii
spravochnik. Frunze, Ob-vo po raspr. polit. i nauchn. znaniu Kirgiz-
skoi SSR, 1961. 199 p. (MIRA 14:10)
(Kirghizistan--Agriculture)

BORISOV, Ye. I.

Striving for higher efficiency in managing apartment houses. Gor.
khoz. Mosk. 33 no.8:1-5 Ag '59. (MIRA 12:11)

1. Zamestitel' predsedatelya Ispolkoma Mossoveta.
(Moscow--Apartment houses--Management)

BORISOV, Ye.I.

Let's successfully complete the preparation of apartment houses for the winter season. Gor. khoz. Mosk. 34 no.10:3-5 0 '60. (MIRA 13:10)

1. Zamestitel' predsedatelya Ispolkoma Mossoвета.
(Moscow--Apartment houses--Maintenance and repair)

BORISOV, Ye.I.

The foreman is the organizer in industry and the instructor in the collective. Energetik 13 no. 3:1-5 Mr '65. (MIRA 18:7)

1. Upravlyayushchiy Moskovskim rayonnym upravleniyem energeticheskogo khozyaystva.

BARABANOV, N.V., kand.tekhn.nauk; BORISOV, Ya.K., inzh.

Considerations on the construction of bulwarks. Sudostroenie
28 no.6:4-10 Je '62. (MIRA 15:6)
(Hulls (Naval architecture))

BARABANOV, N.V., kand.tekhn.nauk; BORISOV, Ye.K., inzh.; LAVRENKOV, L.V.,
inzh.

Effect of pitting corrosion on the tensile strength of steel.
Sudostroenie 28 no.7:47-49 J1 '62. (MIRA 15:8)
(Hulls (Naval architecture)--Corrosion)

BORISOV, Ye. M.

"On the Susceptibility of Domestic Fowl to Foot-and-Mouth Disease". Vestn. sovrem. vete rin., 1950, No. 2.

BORISOV, Ye. M.

"The Normal Antitoxins in Antigangrenous Sera," Zhur. Mikrob., Epidem., i Immunobiol.,
No. 10-11, 1944.

Mechnikov Moscow Regional Inst.

BORISOV, Ye. [m]

20834. Borisov, E. Azotobakter. (K prisuzhdeniya stalinskoy premii M. V. Fedorovu za razrabotku problemy zakrepleniya atmosfernogo azota pockvennymi bakteriyam'). Kul't.-prosvet. rabota, 1949, No. 6, s. 14-16, s portr.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949.

BORISOV, Ye. M.

"The Experience of Advanced Livestock Breeders of Chkalov Oblast' in the Fight
"gainst Avitaminoses of Agricultural Animals," Chkalov Publ. House, 1952. 8 pages.

BORISOV, Ye. M.

"Bradzot and Bradzot-Like Disease of Sheep," Chkalov Publ. House, 1952. 11 pages

BORISOV, Ye. M.

"The Fight Against Diseases of Agricultural Animals," Krasnodar, Kray
State Publ. House, 1952. 110 pages with illustrations

BORISOV, Yev[M.]

BORISOV, EVG.

Pavlov, Ivan Petrovich, 1849-1936

"Story of a great physiologist." A. N. Studitskiy Reviewed by Evg. Borisov.
Znan. sila no. 2, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

BORISOV, Ye.M., kandidat veterinarnykh nauk.

Virulence and reducing power of anthrax cultures.

Veterinariia
32 no.9:80-81 S '55. (MIRA 8:12)

1.Chkalevskaya oblastnaya veterinarnaya opytnaya stantsiya.
(ANTHRAX)

60 R188 V 12 M

AZIMOV, B.A.; AMEN-ZADE, Yu.A.; BORISOV, Ye.M.; BELKINA, G.L.; KUTUZOV, A.I.

Electric model solution of prismatic bar torsion problems.
Dokl. AN Azerb. SSR 11 no.4:233-242 '55. (MIRA 8:10)

1. Predstavleno deystvitel'nym chlenom Akademii nauk Azerbaydzhanskoy SSR M.F.Nagiyevym.
(Torsion)

AZIMOV, B.A.; AMENZADE, Yu.A.; BORISOV, Ye.M.; BELKINA, G.L.; KUTUZOV, A.I.

Solving problems of bending prismatic bars using an electric model.
Dokl.AN Azerb.SSR 11 no.10:665-673 '55. (MLRA 9:5)

1.Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche
nefti.Predstavleno dostavitel'nyy chlenom AN Azerbaydzhanskey SSR
I.G.Yes'manem.

(Strains and stresses---Electromechanical analogies)

SOV/124-57-8-9298

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 8, p 105 (USSR)

AUTHORS: Azimov, B. A., Amenzade, Yu. A., Borisov, Ye. M., Belkina, G. L.,
Kutuzov, A. I.

TITLE: On the Problem of the Twisting of Prismatic Rods (K voprosu
krucheniya prizmaticheskikh sterzhney)

PERIODICAL: Dokl. AN AzerbSSR, 1955, Vol 11, Nr 12, pp 825-831

ABSTRACT: The paper studies the twisting of prismatic rods with a cruciform section, a Tee section, and a section bounded on the outside by a circumference and on the inside by an ellipse the center of which coincides with the center of the circumference. These problems are solved on an EM-7 electric-analog computer for specified relative dimensions of the section. Representations of the isolines for all three cases are shown in graphic form. The values of the potential differences, as well as the components of the tangential (shear) stresses derived from these differences, are submitted in tabular form. A stress-distribution diagram is presented for a round rod weakened by an elliptic cutout. The authors have made a comparison of the solutions obtained by means of the electric-analog computer

Card 1/2

On the Problem of the Twisting of Prismatic Rods

SOV/124-57-8-9298

with the results obtained analytically for the cruciform section and the circular section with an elliptical cutout. It is shown that the error in the calculation of the shear stresses in the case of a cruciform section equals 1.08%, while in the case of the circular section it equals 24.57% at one point and 10.69% at another.

N. O. Gulkanyan

Card 2/2

BORISOV, YE. V.

Tekhnika Bezopasnosti pri Rabote s Radioaktivnymi Izotopami
(Safety Technique in Work With Radioactive Isotopes), by Ye. V.
Borisov, edited by P. L. Gruzina, Moscow, Profizdat, 1955, 115 pp
(from a standard card of the USSR State Library imeni V. I. Lenin,
No 6P2.8) ✓

"Basic information on the nature and properties of radioactive elements, methods of recording radiation, and protective measures is presented. Considerable space is devoted to the preservation and handling of radioactive preparations, description of apparatus for detecting radiation, and measures for protecting the health of people working with radioactive substances. Permissible radiation dose levels are given for the human organism, and examples for calculating these doses are cited." (U)

SUM. 1345

BORISOV, Ye.V.

Using compensators for improved defect detection in the photographic
method of gamma-ray defectoscopy. Probl. metalloved. i fiz. met.
no.4:665-670 '55. (MIRA 11:4)

(Gamma rays--Industrial applications)
(Metals--Defects)

BORISOV, Y Evgeniy Vasil'yevich; GRUZIN, P.L., doktor fiziko-matematicheskikh nauk, redaktor; VESELKINA, A.A., redaktor; KIRSANOVA, N.A., tekhnicheskiiy redaktor.

[Safety measures for work with radioactive isotopes] Tekhnika bezopasnosti pri rabote s radioaktivnymi isotopami. Pod red. P.L. Gruzina. [Moskva] Izd-vo VTsSPS Profizdat, 1956. 113 p. (MIRA 9:6)
(Radioisotopes--Safety measures)

BORISOV, Ye. V.,

"An Investigation of the Mobility of Carbon Atoms in Steel and Alloys with the Use of the Isotope C^{14} ," with Gruzin, P. L., Dr. Phys. and Math. Sci.; Babikova, Ye. F.; Zemskiy, S. V.; Peregudov, N. P.; Polikarpov, Yu. A.; Tirkina, A. N.; Fedorov, G. B., Cand. Tech. Sci.; Shumilov, M. A., Cand. Tech. Sci., page 327

"The Investigation of Boundary and Volume Diffusion by Means of Beta-ray Absorption," with Golikov, V. M., Cand. Tech. Sci.; and Shcherbedinskiy, G. V., page 383.

In book Problems of Physical Metallurgy, Moscow, Metallurgizdat, 1958, 603p.
(Its: Sbornik trudov, v. 5)

The articles in the book present results of investigations conducted by the issuing body, Inst. of Physical Metallurgy, a part of the Cent. Sci. Res. Inst. of Ferrous Metallurgy, located in Dnepropetrovsk. The investigations were concerned with phase transformations in alloys, strengthening and softening processes, diffusion processes (studied with the aid of radioactive isotopes), and certain other questions.

SOV/137-59-2-4054

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 2, p 248 (USSR)

AUTHORS: Gruzin, P. L., Babikova, Yu. F., Borisov, Ye. V., Zemskiy, S. V.,
Peregudov, N. P., Polikarpov, Yu. A., Tirkina, A. N., Federov, G. B.,
Shumilov, M. A.

TITLE: Study of the Mobility of Carbon Atoms in Steel and Alloys Using C¹⁴
Isotope (Izucheniye podvizhnosti atomov ugleroda v stali i splavakh
pri pomoshchi izotopa C¹⁴)

PERIODICAL: Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta chernoy
metallurgii. 1958, Vol 5, pp 327-365

ABSTRACT: The authors examine methods for investigating the diffusion, elec-
trolytic transfer, and distribution of C in Fe, Ni, and some of their
alloys. Data were obtained by the direct (autoradiographic) method
on the effect of Cr, Ni, Mo, and Si on the diffusion of C in ferrite; Ni
and Si have appreciably less effect on the diffusion of C than the carbide-
forming Cr and Mo. It was established that the diffusion-mobility
level changes very little when the Fe and Ni are highly alloyed; it is
displaced only when another base is used, as it happens in Fe-Cr, and
under these conditions the mobility level of C approaches that of the

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SOV/137-59-2-4054

Study of the Mobility of Carbon Atoms in Steel and Alloys Using C¹⁴ Isotope

alloying elements. It was experimentally verified that the C in Fe and Ni is in the cation state. It was established that the cation charge can change depending upon the character of the alloying element. Bibliography: 27 references.

M. G.

Card 2/2

BORISOV, Ye.V.; GRUZIN, P.L.; PAVLINOV, L.V.; FEDOROV, G.B.

Self-diffusion of molybdenum and tungsten diffusion in molybdenum.

Met. i metalloved. chist. met. no. 1: 213-218 '59.

(MIRA 12:10)

(Molybdenum) (Tungsten) (Diffusion)

28551

S/137/61/000/009/026/087
A060/A101

18.7500

AUTHORS: Borisov, Ye.V., Gruzin, P.L., Pavlinov, L.V., Fedorov, G.B.

TITLE: Self-diffusion of molybdenum and diffusion of tungsten in molybdenum

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 9, 1961, 3, abstract 9Zh11
("Metallurgiya i metallovedenie chist. metallov", no. 1, Moscow,
1959, 213 - 218)

TEXT: The self-diffusion of Mo and the diffusion of W in Mo were studied in the interval 1,800-2,175°C by the use of radioactive isotopes Mo⁶⁹ and W¹⁸⁵. The annealing time was from a few hours up to tens of hours. Samples of Mo obtained by arc-smelting in vacuum were subjected to preliminary annealing at 1,500°C for a period of 20 hrs in a H₂ atmosphere. To determine the diffusion coefficient the method of measuring the total activity of the sample remainder was used. The following temperature dependence was obtained for the diffusion coefficient for Mo self-diffusion: $D = 4 \exp(-115,000/RT) \text{ cm}^2/\text{sec}$. For diffusion of W in Mo it was found that $D = 5 \cdot 10^{-4} \exp(-78,000/RT) \text{ cm}^2/\text{sec}$.

[Abstracter's note: Complete translation]

A. Rusakov

Card 1/1

PETROV, Yevgeniy Andreyevich; OVCHARENKO, Nikolay Il'ich; KASATKIN, A.S.,
prof., retsenzent; BORISOV, Ye.V., inzh., retsenzent; POPOV, G.A.,
inzh., red.; KUZ'MINA, Ye.M., red. izd-va; DOBRITSYNA, R.I., tekhn.
red.; SMIRNOVA, G.V., tekhn. red.

[Electronic devices for the protection of workers in the machinery
industry] Elektronnye ustroistva dlia okhrany truda v mashinostroenii.
Moskva, Mashgiz, 1961. 119 p. (MIRA 14:11)
(Industrial safety) (Electronic instruments)

BROUDE, B.M., doktor tekhn.nauk; BORISOV, Ye.V., inzh.

The stability of elements of a compressed channel rod.
Trudy TSNIISK no.13:160-172 '62. (MIRA 15:11)
(Elastic rods and wires)

L 45216-65 EPF(n)-2/EPR/EWP(z)/EWA(c)/EWT(m)/EWG(m)/T/EWP(b)/EWP(t)
 Ps-4/Pu-4/Pad JD/HW/JG

ACCESSION NR: AT5011208

UR/2717/64/000/008/0321/0325

AUTHOR: Borisov, Ye. V.; Gruzin, P. I.; Zemskiy, S. V.

TITLE: Diffusion of some elements in high-melting metals

SOURCE: Dnepropetrovsk, Institut metallovedeniya i fiziki metallov,
Problemy metallovedeniya i fiziki metallov, no. 8, 1964, 321-325

TOPIC TAGS: diffusion, high-melting metal, diffusion coefficient,
 diffusion mobility, molybdenum, chromium, nickel, tantalum, cobalt,
 tungsten, carbon, iron

ABSTRACT: Diffusion coefficients were determined for molybdenum in chromium, nickel, tantalum and tungsten and for chromium, cobalt, tantalum and tungsten in molybdenum. The diffusion of carbon in chromium was studied to evaluate the diffusion mobility of atoms dissolved interstitially. The coefficients were determined by the concentration curve method using radioactive tracers. The samples were rectangular, 10 x 8 x 25 mm. They were annealed in vacuum to obtain a stable homogeneous structure and then one of their surfaces was carefully polished and coated galvanically with a layer of the

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L 45216-65

ACCESSION NR: AT5011208

diffusing element. Diffusion coefficients were determined for molybdenum in nickel at 900-1,200°C, molybdenum in chromium at 1,100-1,420°C, chromium at 1,100-1,500°C, and tungsten and tantalum in molybdenum at 1,750-2,170°C. The diffusion coefficients of carbon in chromium and its low alloys with iron (0.5 and 1.0%) and tantalum (0.1%) were determined. The level of diffusional mobility of tungsten and tantalum in molybdenum is approximately the same as for molybdenum in tantalum and tungsten. With mutual diffusion in molybdenum-tantalum systems, the level of diffusion mobility at a temperature of 1,000°C has a coefficient of the order of 10^{-17} , 10^{-18} cm²/sec, while for molybdenum-chromium and molybdenum-nickel systems it is 10^{-12} and 10^{-13} cm²/sec. The level of diffusion mobility for carbon in chromium at 1,200-1,500°C is of the same order as in iron at 600-800°C. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: None.

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NR REF SOV: 002

OTHER: 004

Card 2/2

BORISOV, Yu. (Moscow).

Spiral wire for electric soldering. Radio no.2:57 P '54.

(MLRA 7:2)

(Solder and soldering)

BORISOV, Yu., dots., kand. ist. nauk

Mutual understanding is a bridge to peace. Sov. profsoiuzy no.13:10-12
Jl '62. (MIRA 15:6)

1. Moskovskiy gosudarstvennyy institut mezhdunarodnykh otnosheniy.
(United States-relations (General) with Russia)
(Russia--Relations (General) with the United States)

BORISOV, Yu.

The French General Confederation of Labor in the struggle
against the policy of reaction and war. Sov. profsoiuzy 17
no. 2:53-57 Ja '61. (MIRA 14:2)
(France—Economic conditions) (France—Politics and government)

BORISOV, Yu.

Organization of labor in repairing assembly lines. Sots. trud
8 no.12:90-92 D '63. (MIRA 17:2)

1. Zamestitel' nachal'nika Upravleniya glavnogo mekhanika,
energetika i tekhniki bezopasnosti Moskovskogo soveta
narodnogo khozyaystva.

BORISOV, Yu.

Use of ultrasound in the food industry. Akust. zhur. 10
no.2:256 '64.

Scientific Council on the problem of the "Physics of Ultra-
sound." Ibid. 1957 (MIRA 17:6)

BORISOV, Yu.A.; PISKUNOV, N.V.

Information. Tekst. prom. 23 no.9:95-96 S '63. (MIRA 16:10)

1. Glavnyy inzh. Kostromskogo zavoda Tekstil'mash Verkhne-Volzhskogo
soveta narodnogo khozyaystva (for Borisov). 2. Redaktor radioveshcha-
niya Kostromskogo zavoda Tekstil'mash Verkhne-Volzhskogo soveta
narodnogo khozyaystva (for Piskunov).
(Textile machinery)

BORISOV, Yu.A.; KUDASHEV, V.I.

Calculating the elasticity curve for a real gas from data on two
reference substances. Inzh.-fiz. zhur. 6 no.8:88-91 Ag '63.
(MIRA 16:10)

BORISOV, Yu.A.; GUSAROV, A.V.; GOROKHOV, L.N.

Mass-spectrometric study of the evaporation of cesium superoxide.
Teplofiz. vys. temp. 2 no.3:487-489 My-Je '64. (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

1 06208 67 EWI(i)/FRT(m)/EWP(a) IJP(a) NW/EM

ACC NR: AP6029536

SOURCE CODE: UR/0046/66/012/003/0372/0373

AUTHOR: Borisov, Yu. Ya.; Statnikov, Yu. G.

ORG: Acoustic Institute, AN SSSR, Moscow (Akusticheskiy institut AN SSSR)

TITLE: Measurement of the boundary layer thickness in the presence of a sonic field

SOURCE: Akusticheskiy zhurnal, v. 12, no. 3, 1966, 372-373

TOPIC TAGS: boundary layer, reaction kinetics, ~~combustion~~, heterogeneous combustion, *boundary layer thickness, acoustic wave, acoustic field, steady flow*

ABSTRACT: It is well known that a sonic field considerably increases the reaction rate of heterogeneous processes. This reaction rate increase is due to reduction of the hydrodynamic boundary layer thickness. Therefore, a study was made of the thickness of the boundary layer on a flat plate in an air stream with 2-3 m/sec velocities in the presence of acoustic waves with frequencies of 1.2-4 kcps and acoustic pressures of 7.6×10^3 — 2.4×10^4 bar. The thickness of the boundary layer was measured with a hot wire anemometer which was automatically displaced across the boundary layer. The results showed that for a steady-state flow with a velocity of 2 m/sec and a boundary layer thickness of 10 mm, the application of an acoustic field can reduce the boundary layer thickness by two orders of magnitude. Orig. art. has: 3 figures. [PV]

[W. A. 88]

SUB CODE: 2D/ SUBM DATE: 23May65/ ORIG REF: 001/ OTH REF: 003/

Card 1/1 LC

UDC: 534.29:532.526

BORISOV, Yu.I. (Moskva); KHODAK, L.Z. (Moskva)

Mechanism of the descending of the charge into the combustion area of a blast furnace operating with a forced blow. Izv. AN SSSR. Met. no.6:8-13 N-D '65. (MIRA 19:1)

1. Submitted August 12, 1964.

Borisov, Yu. F. Curves on complete two-dimensional manifolds with boundaries. Doklady Akad. Nauk SSSR (N.S.) 64, 9-12 (1949). (Russian)

The paper extends results of A. D. Aleksandrov for surfaces with bounded curvature without boundary and results of Cohn-Vossen for smooth surfaces with boundary to surfaces with bounded curvature which possess a boundary [for this and the following compare A. V. Aleksandrov, same Doklady (N.S.) 60, 1483-1486 (1948); these Rev. 10, 147]. The angle between two shortest connections (geodesics) issuing from one point always exists. The concept of total geodesic curvature of a curve towards a given side is generalized to include surfaces with boundary. A geodesic has nonpositive curvature towards either side. Let R be a geodesic polygon bounding a simply connected subregion G of the surface, with sides L_i , $i=1, \dots, n$, and sector angle θ_i between L_i and L_{i+1} measured in G . The integral curvature $\omega(G)$ of G equals $2\pi - \sum_{i=1}^n \varphi(L_i) - \sum_{i=1}^n (\pi - \theta_i)$, where $\varphi(L_i)$ is the total geodesic curvature of L_i towards G . If R is, in particular, a geodesic triangle, $\varphi = \max_{i=1,2,3} \varphi(L_i)$, and the Euclidean triangle with sides L_i has angle θ'_i between L_i and L_{i+1} , then $-130 - 6\varphi \leq \theta_i - \theta'_i \leq 50$, where Ω is the absolute integral curvature of G . If the surface S is homeomorphic to a half-plane and possesses an integral curvature $\omega(S)$, and if the boundary curve possesses a total geodesic curvature φ then $\omega \leq \pi - \varphi$. If, in addition, every subarc of a boundary is a shortest connection of its end points, then $\omega(S) \leq -\varphi$. If S is homeomorphic to a strip bounded by parallel lines and if the two bounding curves have total geodesic curvatures φ_1, φ_2 , then $\omega(S) \leq -\varphi_1 - \varphi_2$. No proofs are given.

H. Busemann (Los Angeles, Calif.).

Source: Mathematical Reviews,

Vol 10 No. 8

Borisov, Yu. F. Manifolds of bounded curvature with a boundary. Doklady Akad. Nauk SSSR (N.S.) 74, 877-880 (1950). (Russian)

On surfaces without boundary the existence of an angle [all concepts are used in the sense of A. D. Aleksandrov, same Doklady (N.S.) 60, 1483-1486 (1943); these Rev. 10, 147] between the curves L_1, L_2 issuing from x is equivalent to the existence of, and equal to, the limit of the angle between two geodesic chords xx_i , where $x_i \in L_i$ and $x_i \rightarrow x$. If the surface has boundaries, then the existence of the angle implies the existence of the limit and the two are equal, but not conversely. If the total geodesic curvatures of the chords xx_i tend to 0, the existence of the limit implies that of the angle. If L_1 and L_2 bound a sector U and if the sector angle exists, then (under an additional, geometrically obvious condition) the angle between L_1 and L_2 exists and equals the sector angle. In terms of angles, conditions are given under which a piece of a general manifold is isometric to a manifold with bounded curvature. Also, necessary and sufficient conditions are given under which gluing together of manifolds with bounded curvature yields a manifold of bounded curvature.

H. Busemann (Los Angeles, Calif.)

Source: Mathematical Reviews,

Vol 12 No. 9.

Link to ...
Borisov, Yu. E. Geometry of a half-neighborhood of a curve in a two-dimensional manifold of bounded curvature. Dokl. Akad. Nauk SSSR (N.S.) 193 (1955), 537-539. (Russian)

On a surface of bounded curvature (all concepts are to be understood in the sense of A. D. Alexandrov) consider a curve L homeomorphic to a segment whose geodesic curvature has bounded variation and is everywhere less than π (i.e. L has no cusps) and such that the geodesic curvature at the endpoints A, B of L is less than 2π . Let AA_1 and BB_1 be shortest arcs which have no other common points with L than A, B , finally R a geodesic polygon connecting A_1 to B_1 such that L, AA_1, R, BB_1 bound on the surface a domain U homeomorphic to a disk. Denote by $L(r)$ the set of points in U with distance r from L . Then a positive r_0 exists such that for $r \leq r_0$ the set $L(r)$ is a rectifiable curve connecting a point A_r on AA_1 to a point B_r on BB_1 . If, beginning at A_r , a parameter σ ($0 \leq \sigma \leq 1$) proportional to the arc length is introduced on

OVER

Borisov, Yu. F.

$L(\tau)$, then $\sigma \rightarrow x, \tau \rightarrow y$ gives a topological mapping of the subset $\tau \leq \tau_0$ of U on a rectangle in the (x, y) -plane. After a suitable change of the parameter σ (except on L) a curve $\tau = f(\sigma)$, where $f(\sigma)$ satisfies a Lipschitz condition, is rectifiable and so is $\tau = \lambda(\sigma)$ for $0 \leq \lambda \leq 1$. If $S(\lambda)$ is the length of this curve, then for $dS(\lambda)/d\lambda|_{\lambda=0}$ a formula similar to the usual holds. Also, if $\alpha(\lambda)$ is the area bounded by $\tau = \lambda(\sigma)$, L and the corresponding arcs of AA_1 and BB_1 , then $d\alpha(\lambda)/d\lambda|_{\lambda=0} = S(0) \int_0^1 f(\sigma) d\sigma$. This yields a necessary condition analogous to the usual for solutions of the isoperimetric problem, in particular the constancy of the geodesic curvature, if no curve with geodesic curvature of bounded variation has negative Gauss curvature.

H. Busemann (Los Angeles, Calif.)

2/2

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BORISOV, Yu. F.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.
Berezman, A. M. (Kemerovo). Laplace Transformation in T_5
Applied to Transformation Fibered Congruence Pairs. 140-141

Mention is made of Finikov, S. P.

Blank, Ya. P. (Khar'kov). On Congruences W . 141

Borisov, Yu. F. (Leningrad). Parallel Shaft of Vector
and the Curves on Irregular Smooth Surfaces. 141-142

Mention is made of Aleksandrov, A. D.

Borisov, Yu. F. (Leningrad). Geometry of Semineighborhood
in Two-dimensional Manifolds of Bounded Curvatures. 142-143

Byushgene, S. S. (Moscow). Congruence Lines on the
Family of Surfaces. 143-144

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Borisov, Yu. F. An extrinsic property of geodesics on smooth surfaces. Vestnik Leningrad. Univ. 11 (1956), no. 19, 35-40. (Russian)

1-F/W

3

Let S be a surface of class C^1 in E^3 . A polygon with vertices $q_1, \dots, q_n$ on S is called normal if the (or a suitable) plane through q_{i-1}, q_i, q_{i+1} ($i=2, \dots, n-1$) contains the normal to S at q_i . For the points p, p' on S let $UCVCS$, where V is homeomorphic to a closed disk, and U is open and contains the closed disk about p (in the sense of the intrinsic metric on S) with the intrinsic distance of p and p' as radius. Then there exists a shortest connection of p and p' on S which is the limit of normal polygons $q_1, \dots, q_n$ with $q_1=p, q_n=p'$. Whether this holds for every shortest connection of p and p' is not known.

H. Busemann (Los Angeles).

See some

AUTHOR: BORISOV Yu. F.

43-7-16/18

TITLE: The Parallel Shift on a Smooth Surface. I (Parallel'nyy perenos na gladkoy poverkhnosti)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya Matematiki, Mekhaniki i Astronomii, 1958, Nr 7 (2), pp 160-171 (USSR)

ABSTRACT: Definition: Let $A_1, A_2, \dots, A_n$, $n \geq 2$ be an ordered system of points of the surface F and let P_i be the tangent plane in A_i ($i=1, 2, \dots, n$). Let the vector $\alpha_n \in P_n$ arise from the vector $\alpha_1 \in P_1$ by a parallel shift along the point system $A_1, A_2, \dots, A_n$ if there exist vectors $a_k \in P_k$ ($k=2, \dots, n-1$) such that the projection of a_k onto P_{k-1} is equal to the vector a_{k-1} ($k=2, \dots, n$).
Definition: Let L be a curve on F which combines A and B . Let $\bar{A}$ be a point system on L beginning in A and terminating in B . Let $\delta(\bar{A})$ be the greatest arc between two neighboring points of the system. Let $\alpha_{\bar{A}} \in P_B$ be a vector arising from $\alpha \in P_A$ by a parallel shift along A . Let the vector $\beta \in P_B$ be the result of a parallel shift of α along L if $\beta = \lim_{\delta(\bar{A}) \rightarrow 0} \alpha_{\bar{A}}$, where the lim

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The Parallel Shift on a Smooth Surface.I

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is taken over all possible systems $\tilde{A}$ if $\delta(\tilde{A}) \rightarrow 0$.

Definition: The spherical image of L has the quadratic length

zero if $\lim_{\delta(\tilde{A}) \rightarrow 0} \sum_{i=1}^{n-1} \theta_i^2 = 0$, where θ_i is the angle between the normals to F in A_i, A_{i+1} .

Theorem: In order that for $\delta(\tilde{A}) \rightarrow 0$ the lengths of the vectors $\alpha_{\tilde{A}}$ arising at the parallel shift of $\alpha \neq 0$ along L , converge to $|\alpha|$, i.e.

$$\lim_{\delta(\tilde{A}) \rightarrow 0} |\alpha_{\tilde{A}}| = |\alpha|,$$

it is necessary and sufficient that $\tilde{L}$ has a spherical image of quadratic length zero.

Theorem: $A, B \in L$, let L have a spherical image of quadratic length zero. Then the parallel shift from A to B along L for every vector $\alpha \in P_A$ is determined uniquely, i.e. there exists $\lim_{\delta(\tilde{A}) \rightarrow 0} \alpha_{\tilde{A}}$.

In the last paragraph the author proposes further definitions of the parallel shift and proves corresponding theorems.

SUBMITTED: 4 January 1957

AVAILABLE: Library of Congress

Card 2/2 1. Surfaces-Theory 2. Mathematics

16(1)
AUTHOR: Borisov, Yu.F. SOV/43-58-19-5/16
TITLE: Parallel Displacement on a Smooth Surface, II
(Parallel'nyy perenos na gladkoy poverkhnosti, II)
PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,
mekhaniki i astronomii, 1958, Nr 19(4), pp 45 - 54 (USSR)
ABSTRACT: The author considers smooth surfaces with the property that
the parallel displacement of a vector defined by the author
in the first publication [Ref 1] converges uniformly on
every set of curves which possess a bounded length and which
lie in a domain with compact closure. It is stated that each
geodesic of such a surface is smooth and that the tangential
vector along the geodesic is parallel-displaced. Altogether
five theorems are proved. Finally the author gives a survey
on his further publications (III and IV).
There are 3 Soviet references.
SUBMITTED: March 18, 1957

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16(1)

SOV/43-59-1-5/17

AUTHOR: Borisov, Yu.F.

TITLE: Parallel Displacement on a Smooth Surface. III (Parallel'nyy perenos na gladkoy poverkhnosti. III)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 1(1), pp 34-50 (USSR)

ABSTRACT: The present paper is a continuation of the contributions [Ref 1,2] of the author. In §1 he shows that the parallel displacement along a rectifiable curve defined in [Ref 1] has an internal geometric character, e.g.: Theorem: Let $K=AB$ be a rectifiable curve, m_A a direction in A , t_A direction vector of m_A . Let t_B be the vector which arises by displacement of t_A along K into the point B ; m_B the direction corresponding to t_B . Then m_B can be obtained from m_A by parallel displacement along K . §2 deals with the bend of a curve which is defined in a kind somewhat deviating from the usual one as integral of the geodesic curvatures. The author proves an analogue to the theorem of Gauss-Bonnet. In §3 different definitions of the geodesic curvatures are compared. §4 investi-

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Parallel Displacement on a Smooth Surface III

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gates the possibility to define a surface curve by natural equations. It is shown that to every continuous additive interval function there exists a surface curve, the bend of which is equal to this function. Altogether the paper contains 3 definitions and 11 theorems. There are 5 references, 4 of which are Soviet, and 1 Italian.

SUBMITTED: May 6, 1957

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16(1)

AUTHOR: Borisov, Yu.F.

SOV/43-59-13-2/16

TITLE: On the Connection of the Spatial Form of Smooth Surfaces With its Inner Geometry

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 13 (3), pp 20-26 (USSR)

ABSTRACT: Let $\theta(M, N)$ be the angle between the surface normals in the points M and N; g be the interior metric of the surface. Let a surface belong to the class $C_0^{1,2/3}$ if for $M, N \in G$, where G is an arbitrary domain with a compact closure, it holds uniformly with respect to M and N:

$$\frac{\theta(M, N)}{[g(M, N)]^{2/3}} \rightarrow 0 \text{ as } g(M, N) \rightarrow 0.$$

Theorem: Let the surface $F \in C_0^{1,2/3}$ be a manifold of bounded curvature and let the curvature of every domain $G \subset F$ be positive (negative). Then every domain $G \subset F$ with a compact closure is a surface with a bounded external curvature (compare [Ref 6,7]). Let the surface F satisfy the assumptions of the theorem and let it have a positive curvature. Then it holds: 1. Every point $M \in F$ has a convex neighborhood. In connection with the theorem of

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On the Connection of the Spatial Form of Smooth
Surfaces With its Inner Geometry

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A.V. Pogorelov [Ref 8] it follows: 2. If $g_{11}du^2 + 2g_{12}dudv + g_{22}dv^2$,
 $g_{ij} \in C^k$, $k > 4$, is a form of positive curvature and $\omega(u, v) \in C^{1, \alpha}$,
 $\alpha > \frac{2}{3}$ is a solution of the system $\omega_u^2 = g_{11}$, $\omega_u \omega_v = g_{12}$, $\omega_v^2 = g_{22}$,
then $\omega(u, v) \in C^{k-1}$.

Furthermore: Two isometric surfaces $F_1, F_2 \in C^{1, \alpha}$, $\alpha > \frac{2}{3}$ with a
positive interior curvature are congruent.

There are 10 references, 8 of which are Soviet, 1 German,
and 1 Dutch.

SUBMITTED: February 28, 1958

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